Indirect and Cumulative Impact Analysis
Lincoln Bypass - State Route 65
Placer County, California

KP R19.6 / R38.3
PM R12.2 / R23.8

SR 65 Lincoln Bypass
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Introduction

Caltrans is proposing to construct a State Route 65 freeway bypassing the City of Lincoln in Placer County, and has circulated a Draft Environmental Impact Report/Draft Environmental Impact Statement for public review and comment from November 21, 2001 to January 15, 2002. At that time, and during subsequent consultations as part of the NEPA/404 Integration Process, the U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers raised further concerns about the potential cumulative and indirect effects of the project. The following analysis examines the potential cumulative and indirect impacts associated with the Bypass. Consultation with the EPA for guidance on addressing cumulative and indirect impacts was helpful in developing this analysis.

Assessing indirect impacts of transportation projects in rapidly growing areas of California is difficult. Caltrans projects are designed to relieve existing congestion and respond to planned growth in accordance with local and regional plans and policies. Local governments determine the extent of growth they desire. These growth decisions are independent of any California Department of Transportation position and are the legal authority of the local agencies. Due to limited resources and competing local, regional and statewide transportation needs, Caltrans must work with regional transportation planning agencies and local entities to identify funding priorities. Projects may be funded in whole, or in part, by local, state, federal or developer funds. Many local projects do not have state or federal funding and may be constructed at the discretion of the local agency. Resources are distributed to projects that will improve mobility and the safety of the public. Often project construction is done in phases so that resources can be equitably distributed throughout the state.

Methodology/Limitations

A variety of quantitative and qualitative methods such as ArcView GIS files, City and County General Plans, conversations with city and county planners, review of planning websites and documents were used in this analysis. GIS coverage's were downloaded from resource agencies, or obtained from Placer County and the City of Lincoln.

In addition to the mapping and quantitative computations, qualitative information was obtained from City of Lincoln and Placer County General Plans, City and County personnel, Sacramento Area Council of Governments, Placer County Transportation Planning Agency, regulatory websites and personnel, resource websites and personnel, CEQA, NEPA and FHWA guidance papers and regulations, various project environmental documents, academic papers on the subject matter, State Route 65 specialists studies, and consultants who have provided analysis. A list of these resources is provided at the end of this document.

There are inherent difficulties in assessing indirect and cumulative impacts that need to be taken into consideration. Academic papers such as, "Road Expansion, Urban Growth, and Induced Travel: A Path Analysis" and "Do Highways Matter? Evidence And Policy Implications of Highways' Influence on Metropolitan Development" discuss the complexities

involved with transportation planning. References cited at the end of this analysis provided much discussion on analysis but failed to provide exact definitions of terminology. Instead they gave discretion to the transportation-planning agency and pointed to case law for examples.

The Council of Environmental Quality and the National Environmental Policy Act regulations identify uncertainties about evaluating indirect effects of a proposal and recognize that many methods of analysis have inherent weaknesses.

> *"…if there is total uncertainty about the identity of future land owners or the nature of future land uses, then of course, the agency is not required to engage in speculation or contemplation about their future plans. But, in the ordinary course of business, people do make judgments based upon reasonably foreseeable occurrences. It will often be possible to consider the likely purchasers and the development trends in that area or similar areas in recent years; or the likelihood that the land will be used for an energy project, shopping center, subdivision, farm or factory. The agency has the responsibility to make an informed judgment, and to estimate future impacts on that basis, especially if trends are ascertainable or potential purchasers have made themselves known. The agency cannot ignore these uncertain, but probable, effects of its decisions."*

This analysis provides information on the known landowners, growth pressures, and projects in the area and the known plans and policies of the local jurisdictions and what all this may mean to natural resources in the project area. The speculative future of land ownership and projections of land development scenarios are beyond the scope of this analysis.

The task of determining indirect and cumulative impacts from a project is an exercise in professional judgment and prudence. Caltrans has tried to obtain information that will satisfy the requirements of CEQA, NEPA and Section 404 of the Clean Water Act, and to provide regulatory agencies with information regarding possible impacts associated with this project.

FHWA's "Interim Guidance: Questions and Answers Regarding Indirect and Cumulative Impact Considerations in the NEPA Process" describes the difficulty in analyzing these types of impacts. The guidance states, "A proposal for a new alignment project in an area where no transportation facility currently exists, or one that adds new access to an existing facility may indicate the potential for project related indirect impacts from other distinct but connected actions." It is up to the transportation agency to analyze and determine what 'may' occur given the conditions of other factors in the project area.

The guidance also directs the project proponent to include the effects of "reasonably foreseeable" actions. The focus is intended to differentiate what is likely to occur or probable, rather than what is possible. This distinction is an important point to keep in mind when reviewing the information contained in this analysis. The guidance further states, "…we find that reasonably foreseeable events, although still uncertain, must be probable."

The National Cooperative Highway Research Program desk reference indicates that under NEPA, an EIS should include all reasonably foreseeable impacts, <u>not</u> all conceivable impacts. The reference also concludes that "….all potentially significant future impacts must

be evaluated, but may be ignored if the impact is improbable although possible, or if the impact is too uncertain to make reasonable evaluation of it possible."

Although the bypass may change the pattern of growth in the area, much of the growth that would occur in the area can be determined from reviewing plans of the City and County, obtaining information on projected growth, recent development patterns, discussion with City and County personnel and the policies currently implemented in the project area. Planned growth is occurring in the project area and although the bypass may accelerate some of this growth, there are no specific developments that have been identified as dependent upon the freeway for its ultimate approval.

Several meetings and discussions with EPA regarding Indirect and Cumulative Impacts provided direction on how to this issue within the project area. Although, there were differences in perspectives regarding impacts, an agreement was made to provide an analysis that included discussion and possible quantitative information regarding resources in the area. In order to respond to EPA's concerns regarding Indirect and Cumulative impact analysis, Caltrans agreed to provide some form of measurement of the resources that are within proximity to the bypass intersections and interchanges and hence the four-mile circle was used to satisfy this request. This concept of using a four-mile circle was published in Caltrans Standard Environmental Reference material as a guide for determining possible impacts. Possible impacts are not necessarily probable and for that reason may not be considered as indirect impacts.

This four-mile circle may be too large given the growth that is projected and planned in the area and there is the potential to double count impacts due to the City's plans to develop regardless of the bypass. The four-mile circles also cross, or come very close to, the existing SR 65 alignment. These circles are therefore seen as worst-case potential influence areas from **both** the bypass and the development patterns that are occurring in the area. It cannot be determined which indirect impacts are attributed directly to the bypass and which can be attributed directly to the development in the area. The four-mile circles are used to provide information on the resources in the area and provide a reference for discussion regarding these potential impacts.

Many factors contribute to the changes in land use in the Lincoln area. The following analysis presents some of these factors for consideration. The project may have potential indirect impacts in areas around the interchanges and at-grade intersections, but determining the impacts of what is probable versus what is possible is a very difficult task. Models used in any analysis must use assumptions that are agreed upon by all parties involved. If there is question as to the validity of a model's assumptions, other analysis can be conducted at the discretion of the lead agency. It is challenges of this sort that make it difficult to clearly identify the exact impacts, other than direct impacts, attributable to the bypass.

Information Gathering

Obtaining the information in this analysis posed tremendous challenges. The GIS files were often not in the correct technical map projection to be used with other GIS files. Many of the environmental documents of local projects, when available, did not provide quantitative information of potential indirect and cumulative impacts but merely discussed the natural resource impacts in a general sense. Very often, the environmental documents simply were not available.

Project Description

The Draft Environmental Impact Report/Draft Environmental Impact Statement (DEIR/S) for the State Route (SR) 65 Lincoln Bypass Project covers the ultimate project, which includes a four-lane freeway with interchanges at Industrial Avenue, Nelson Lane, Wise Road and Riosa Road. There will be an overcrossing at Nicolaus Road and an undercrossing at Dowd Road, neither of which will have access to the freeway. A cul-de sac will be constructed at Moore Road, eliminating access to the freeway from Moore Road. Due to funding constraints and project priorities, the bypass will be built in phases. However, the purchase of right-of-way and the earthwork for the ultimate project will be done in the initial phase.

Revisions to the project may be necessary if funding changes. A minimum project will be constructed following the completion and approval of the Final EIR/EIS and permit approvals. Final engineering design, preparation of plans, specifications and estimates and right of way acquisition follow the environmental approval process before advertising and awarding of a construction contract occurs. Funding availability will dictate the progress of future construction for the ultimate project. Initially, four lanes will be constructed from the beginning of the project near Industrial Avenue up to Nelson Lane. From that point on to where the Bypass would re-join existing SR 65 near Sheridan, only two lanes will be constructed, with the earthwork for the entire four-lane footprint being laid down.

An overcrossing at Nicolaus Road and undercrossing at Dowd Road will be built during the initial construction. Due to the rising costs of Right of way, purchase for the ultimate four-lane freeway project will be acquired during the first phase.

Because of the passage of time there will likely be a need to periodically reconfirm the project's environmental approvals before the ultimate project is constructed. The future interchanges at Nelson Lane, Wise Road and Riosa Road and the addition of lanes will have additional environmental documentation that may tier off this Environmental Document.

Discussion of interchanges and intersections

Industrial Avenue

An interchange at Industrial Avenue is required due to the heavy volumes of traffic that are expected in that area. This interchange will be constructed in the initial phase and would serve the residents of the Twelve Bridges and Lincoln Crossing subdivisions, as well as those travelers coming from Sacramento and Roseville who are making inter-regional trips.

Nelson Lane

The first phase of the proposed project includes construction of an at-grade intersection at Nelson Lane. As the need arises and funding allows, an interchange would be constructed. This interchange would serve the industrial type traffic using the airport and industrial parks surrounding the airport. An intersection and later, an interchange, at Nelson allows for access to the airport. The Lincoln Regional Airport serves an important transportation need for the planned industrial area adjacent to the airport. The Lincoln Airport Authority has proposed major improvements to the airport over the next 20 years. Local access to the airport is critical to the success of both the airport and the adjacent industrial type businesses.

Wise Road

The DEIR/S describes an at-grade intersection at Wise Road in the initial phase of the project and an interchange as the ultimate plan for Wise Road. Access is needed to detour trucks that would otherwise haul aggregate and other material through the town of Lincoln. Additional conservation easements will be acquired in the Coon Creek watershed and floodplain area to address EPA concerns regarding resources within the four-mile circle of Wise Road. The acquisition strategy will be determined in coordination with Placer Legacy and EPA.

Riosa Road

At the north end of the Bypass project, Riosa Road would have an at-grade intersection for the first phase of the project and later an interchange as traffic volumes warrant and funding becomes available. Access to the freeway at this point is essential to serve the community of Sheridan.

Factors influencing land use changes

Transportation investments result in major land use changes only in the presence of other factors, such as supportive land use policies, local development incentives, availability of developable land and a good investment climate. Factors influencing the likelihood and rate of development near rural interchanges include distances to major urban or regional centers, traffic volumes on intersecting roads, presence of frontage roads and availability of water and sewer and other infrastructure. Following is a discussion of land use policies, plans for infrastructure improvements, availability of land and the desirability of the area that would influence land use in the Lincoln area.

Land Use Policies

City of Lincoln land use policies

Figure 1 shows the City and County General Plan designations, including changes currently being considered for the Lincoln General Plan update. As stated in their General Plan, it is the City of Lincoln's policy to ensure that agriculture will continue to be a significant land use within the city's sphere of influence.

Within the project area, the primary zoning designations are Residential, through the new subdivisions Lincoln Crossing and Three D, and Agriculture from Moore Road to the edge of

the City of Lincolns' Sphere of Influence limits. There are a total of 89,139 acres within the City's current sphere of influence. Of the acreage within the sphere, there is approximately 5,114 acres of land designated and zoned as agricultural. The percentage of agricultural land that could be impacted by policies and plans within the city represent 5.74% of the total acreage within the sphere of the city. Hence, the majority of land is designated as urban and zoned as such, further development will probably convert some of the agricultural and timberland to urban uses.

The City is currently working on updating their General Plan and expects to have it completed later this year. Preliminary consideration has been given to annexing an area that would include the airport and the bypass. (See Figure 1) This area would extend slightly west of the bypass. The area considered for annexation could be developed in coordination with Lincoln's plans to expand their airport. It is possible that land use in this area could be re-zoned for mixed-use development and industrial. However, CEQA reviews and approval of the General Plan annexation would be required in order for this to occur.

Placer County land use policies

The portions of the project study limits that are outside Lincoln's sphere of influence are under Placer County's jurisdiction. The area affected by the proposed project is zoned for Agriculture in Placer County's General Plan, most with an 80-acre minimum parcel size with some smaller areas having a 20-acre minimum parcel size. (See Figure 1) Placer County has a policy to designate adequate agricultural land and promote development of agricultural uses to support the continued viability of Placer County's agricultural economy.

Sacramento Area Council of Governments (SACOG) and the Placer County Transportation Planning Authority (PCTPA) projections for the area

Lincoln is included in SACOG's list of fastest growing communities that also includes Rancho Cordova, Vineyard, Cosumnes and West Sacramento. The City of Lincoln is projected to have a population of 62,414 in 2025, up from 16,154 in the year 2000 (SACOG Metropolitan Transportation Plan). The fastest growing housing markets in the Sacramento metro region are in the communities of Laguna, Rancho Cordova, Vineyard, Lincoln and Roseville. Per SACOG, there are currently 6,541 housing units in Lincoln with 24,964 projected for the year 2025. However, projections show that the fastest growing employment markets will be in Roseville, Downtown Sacramento, West Sacramento, Rancho Cordova and Laguna. It's anticipated that 40 percent of job growth between 2000 and 2025 will come in office and manufacturing jobs in these suburban areas. These suburban job centers will increase the demand upon transportation infrastructure and will place additional pressure on interregional travel options.

SACOG's projections are based upon the Metropolitan Transit Plan (MTP) for the region. The MTP includes transportation infrastructure improvements that are priorities in the region. The modeling includes these infrastructure improvements and other variables to determine what assumptions should be made regarding population, housing and job growth projections for the region.

Growth and traffic congestion are two areas of particular concern to SACOG. The economy in the region is undergoing a major change due to the influx of non-government jobs from surrounding areas that have a higher cost of living. In addition, the overall population in the region is expected to grow by almost a million people (approximately 50%) by 2025. Most development is occurring beyond the existing urban development, placing additional pressure on infrastructure.

SACOG has designated several regional projects as a priority in order to adequately serve the growth planned in the region. The Lincoln Bypass is listed as one of those priority projects. Other priority projects include upgrades to the Capitol Corridor Intercity Rail and a new Regional Rail Service, other highway improvements, Light Rail extensions, the Placer Parkway and Regional Bicycle and Pedestrian Improvements.

SACOG is currently undertaking a transportation/land use study examining the growth that is expected to occur in the region up to the year 2050 and the impacts associated with that growth. SACOG is developing this study to provide information on land use decisions and what impacts those decisions will have on quality of life issues, mobility and the environment in the long term. SACOG hopes this study will bring the local jurisdictions together to incorporate changes in land use.

Effect of infrastructure such as sewer and water on land use changes

Current and future plans for infrastructure improvement in Placer County

There are no plans for infrastructure improvements in the area west of the bypass due to the current agricultural character of the area. The town of Sheridan is the only urban area in the unincorporated portion of the County and it is currently under a moratorium on growth until new sewer facilities are constructed. Currently, there are no plans for expansion of the sewer or water systems for Sheridan.

Current and future plans for infrastructure improvement in the City of Lincoln

The City plans to build a new wastewater treatment and reclamation facility located off of Moore and Fiddyment Road. The old wastewater treatment facility, currently located west of the city of Lincoln near Nicolaus Road and Nelson Lane, will be dismantled. The new facility will serve customers currently using the old wastewater treatment plant as well as the residents of the new subdivisions.

Some minor infrastructure improvements include well sites for back-up water and peak demand purposes.

Many of the local road improvements are being planned to accommodate the expected growth under the new general plan. Local officials have indicated that many local roads are currently being heavily used to bypass the congestion in the city. These transportation projects may or may not have a portion funded by State and Federal monies. Some of these projects may be funded in whole or part by Local agency or developer funds. In the City of Lincoln, the following local road improvements are planned and/or are in various stages of construction (See Figure 5):

- 2003 – Aviation Blvd.: Construct new two- to four-lane road from Nicolaus Rd. to Wise Rd.
- 2003 – Lincoln Parkway: Construct two-lane road including Union Pacific Railroad overcrossing, from SR 65 to Westlake Blvd.
- 2003 – Lincoln Parkway: Construct new four-lane road from Moore Rd. to Westlake Blvd.
- 2005 to 2010 – Lincoln Parkway: Various widening projects at different locations.
- 2005 – Gladding Parkway: Construct a new four-lane roadway from SR 65 to East Ave.
- 2005 – Joiner Parkway: Widen from two to four lanes, from First Street to Moore Rd. and construct new bridge.
- 2006 – Ingram Parkway: Construct a new four-lane parkway from Sun City Blvd. to Ferrari Ranch Rd.
- 2010 – Aviation Blvd.: Widen from two to four lane, from Venture to Airpark Drive.
- 2010 – Industrial Avenue: Widen from two to four lanes from Route 65 to Athens Blvd.
- 2010 – Lakeside Drive: Widen from two to four lanes, from Nicolaus Rd. to Airpark Drive.
- 2015 – G Street: Widen from two to four lanes with left-turn pockets, from Westlake Blvd. to Industrial Avenue

Availability of Developable Land

Currently much of the land in the project area and outside the city of Lincoln Sphere of Influence is zoned for agriculture. However, development companies, not farmers or ranchers own some land near proposed intersections. Figure 5 shows the land ownership in the vicinity of the Lincoln Bypass. Most of the investment properties are within the area that is projected for annexation into the City of Lincoln and as such would be more likely to develop if zoning was changed and the Williamson Act contracts were not renewed. Currently, much of this land is still under Williamson Act contracts (Figure 2).

The area under consideration for annexation to Lincoln is shown in Figure 1. Zoning west of the Bypass is expected to remain agriculture within the planning horizon of the Placer County General Plan (2004-2014). The presence of the Bypass may place development pressure on the areas surrounding the intersections and interchanges if zoning changes occur. The area between the city of Lincoln and the proposed bypass is expected to be developed within the general plan horizon and is zoned accordingly.

Housing and Employment Trends in the Lincoln Area

The City of Lincoln plans to increase its housing stock to accommodate the 13% anticipated average annual growth over the next 10 years (until 2012). Between 2010 and 2020 Lincoln's forecasted annual growth rate is expected to decline. However, rapid growth during

the period of 1999-2002 increased Lincoln's population from approximately 8,700 residents to 17,700[1]. This rapid growth translates into a three-year average annual growth rate of 26%.

The rapid population growth in Lincoln has corresponded to the growth in housing. Lincoln's housing stock increased from 3,359 to 6,766 between 1999 and 2002. (City of Lincoln's General Plan Background Report, December 9, 2002). The Sun City Lincoln Hills Development was a significant contributor to this population and housing surge, adding approximately 2,800 homes with an additional 3,800 homes yet to be built.

According to the City these growth projections are not based upon transportation improvements. The City analyzes the growth potential and then reviews the infrastructure needed to accommodate this growth. This is done for the infrastructure that the City controls such as the infrastructure improvements mentioned on page 9 of this analysis.

The Lincoln bypass has been included in the traffic modeling assumptions for both the City of Lincoln and SACOG because it is included in the MTP. The MTP is developed to help establish priorities for the region and to direct infrastructure improvements to accommodate the growth.

Housing in Roseville is expected to increase from 33,568 in 2000 to 49,674 in 2025. Employment in Roseville area is expected to grow from 59,591 to 112,476 in 2000 and in Lincoln from 4,612 in 2000 to 17,463 in 2025 (SACOG Metropolitan Transportation Plan and Lincoln's General Plan Background Report, December 9, 2002). Since the 1990's, Lincoln's employment has grown by approximately 600 jobs, 300 of which were in the manufacturing sector. Much of this growth can be attributed to leased space at the business park located near the Lincoln Regional Airport. Retail employment is projected to increase during this period to serve the increased population expected in the area.

Desirability of the area

According to the SACOG's Metropolitan Transportation Plan, the high cost of housing in the Bay Area and job opportunities in west Placer County have made the Sacramento Valley a desirable area. Job centers are projected to grow in Roseville and Rocklin that will ultimately have an impact upon the City of Lincoln due to its proximity.

Increased accessibility

The Lincoln Bypass will improve access to areas surrounding Nelson Lane. Eventually, as the need and funding allow, an interchange is proposed for Nelson Lane. Nelson Lane is currently a non-engineered low volume county road. It provides access to the airport and the industrial area adjacent to the airport. Nelson Lane will be upgraded when the Lincoln Bypass is built. The area that Nelson Lane serves is already zoned Industrial, and its zoning is not likely to change when the road is improved.

[1] This number varies depending on the source: Dept. of Finance, June 2002 estimates 17,713 residents, SACOG 2002 estimates 16,154, Lincoln's General Plan Background Report, December 2002 estimates 17,700.

Land availability and prices

Population growth and labor market growth in Sacramento, Rocklin and Roseville has increased housing and land prices throughout the region. With this growth, the demand for housing and land for development has escalated. Although the cost of land is increasing in the region, it is still relatively affordable and hence has development pressure due to its proximity to regional job centers.

The following table shows the average price of home sales for Lincoln and the surrounding areas (MetroLink, April 2003 & Sacramento Business Journal).

Table 1 Average Home Sales

Lincoln	Rocklin	Roseville	Sacramento	Bay Area	Auburn
$292,737	$314,534	$304,685	$361,945	$443,000	$385,125

Location attractiveness

Lincoln is attractive to potential homebuyers for a number of reasons. The proximity to job centers in Roseville, Rocklin, Auburn and Sacramento is certainly one reason people move to Lincoln. Many residents of Lincoln have indicated that they moved to the area for its rural qualities and small town feel.

Land availability and the lower home prices are another draw to this area, as new homebuyers get priced out of the surrounding cities.

Description of planned developments

Many of the Specific Plans for the subdivisions include "livable community" elements such as bike/pedestrian mobility. Other elements being incorporated are a mix of densities and types of residential units integrated with commercial, light industrial, business/professional, employment, recreation, habitat preserves, open spaces and public facilities such as schools, church sites, etc. Mixing up land uses can cut down or even eliminate the use of the automobile for everyday errands and commuting to work travel.

In addition, the City of Lincoln has prepared a Bikeway Master Plan, adopted in 2001. The plan proposes about 53 miles of bikeway facilities (8.67 miles of Class I bike paths, 39.60 miles of Class II bike lanes and 4.65 miles of Class III bike routes). The development of the proposed facilities will provide for bikeways throughout the Lincoln City limits, and includes regional connections to Rocklin, Roseville and Auburn.

Summary of Factors influencing land use changes

The effect of transportation improvements on growth is not easy to measure since there are many factors that influence growth. There are no universally accepted analytical methods to provide guidance on measuring impacts associated with transportation projects. In assessing the growth inducement impacts for this project the analysis includes information on land use, general plans, city and county policies on growth, current zoning and possible changes that can be reasonably foreseen to impact growth. We have avoided speculating on future land use and instead tried to make reasonable assumptions based upon known conditions in the project area.

Studies have shown that development will likely occur when new roads allow access to land previously inaccessible and the area is prime for development. However, whether highways facilitate such growth or whether they are merely serving the growth that would have otherwise occurred has never been agreed upon.

The City of Lincoln has been one of the fastest growing areas in the State and is accommodating this growth with their plans and policies. This growth has occurred in spite of the transportation infrastructure not keeping pace with the need. Factors that have contributed to the growth occurring in this area are lower housing prices, proximity to job centers, the rural quality of the town and a positive economic climate. Due to all these other factors being in place, it can be reasonably argued that growth occurring now and expected in the near future would take place regardless of the Lincoln Bypass.

Potential Indirect / Secondary Effects

Indirect effects are described in the CEQ regulations as those effects "which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems." (40 CFR §1508.8(b))

The CEQ regulations definition poses difficulty in determining the potential indirect impacts attributable to this project. It is Caltrans professional opinion that the exact extent of potential indirect impacts cannot be determined.

Each project should be viewed in light of the existing conditions that may influence the potential impacts. In this analysis, the conditions surrounding the City of Lincoln's growth have been examined. The extent of indirect impacts caused by the bypass alone cannot be fully determined due to the City of Lincoln's policies regarding land use, current growth, and projected growth and land use policies.

The following potential indirect impact figures are presented to provide information on resources in the area that could be impacted from **both** the bypass and Lincoln's land use policies. The four-mile circle does not constitute the extent of indirect impacts from the bypass since we cannot precisely extract those indirect impacts directly linked to the development that is planned or already occurring from the potential indirect impacts from the bypass. There are no proven methodologies that provide measurements regarding indirect impacts associated with development patterns and those that are attributed to transportation infrastructure.

Given the limitations of the indirect analysis, it can be stated that growth is reasonably likely to occur along the new highway corridor, and particularly at the proposed new interchanges. However, those areas in question are currently zoned for agriculture and would require a change in zoning for growth to occur there. In addition, much of the area in question

is being considered for annexation due to the projected growth in both the industrial area around the airport and entire city. Given the pace of change in Placer County and the City of Lincoln, any incremental responsibility Caltrans might have for the growth cannot be quantified.

The purpose of this project is to relieve congestion in the City of Lincoln and provide for a regional traffic solution to accommodate projected traffic volumes through the year 2025. Additional growth, beyond what is already planned and accounted for in the City and County General Plans, is not an expected consequence of this project. The Lincoln Bypass may increase the pace of growth and the location of growth, but not the likelihood for growth. The Lincoln Bypass is not funded by developer funds nor is it a requirement by the city for the development that has occurred heretofore.

There are three areas that could be subject to additional growth somewhat dependent upon the freeway, the beginning of the project at Industrial Avenue, the access at Nelson Lane, Wise Road and the end of the project at Riosa Road.

At Industrial Avenue, much of the area is zoned for residential development, so no further impacts to natural resources due to the freeway are expected at this location.

Nelson Lane is zoned for Industrial type land use to the north, and agricultural to the south. It can be expected that the agricultural area would be under increased pressure to develop when access is provided and Nelson Lane is improved. Currently, there are no investment type owners adjacent to the proposed interchange, however, Warm Springs Investment owns 997 acres to the west of this area, from Moore Rd. to Nicolaus Rd. In addition, these parcels are within the proposed annexation area proposed by the City of Lincoln. It could be expected that these areas would be eventually rezoned Industrial .

Wise Road is located within close proximity to both the airport and Teichert Aggregate facility and is currently zoned as agricultural with a 10-80 acre minimum. The area surrounding this intersection will be under pressure to develop as the airport expands and if annexation occurs. However, there are current restoration and conservation activities in this area. Placer Legacy, in coordination with some land owners, have restored areas or have plans to restore areas within the Coon Creek watershed and floodplain area (Figure 9).

In light of the potential growth inducement impacts associated with access at Wise Road Caltrans has worked in coordination with Placer Legacy and EPA to develop an avoidance strategy that will help conserve the Coon Creek corridor by including acquisition of conservation parcels. These parcels will attempt to keep the Coon Creek corridor intact and avoid potential indirect affects to aquatic resources.

Currently, Riosa Road is zoned rural residential to the east and agricultural to the west. It is within the Sphere of Influence of Sheridan. Sheridan currently has a moratorium on development until they update their General Plan. Although there are no immediate plans to develop this area, with a zoning change, development could take place here.

Resources within a four-mile circle around proposed intersections and interchanges

Agriculture

At this time, the area west of the bypass is zoned as agricultural. However, approximately 3,302 acres to the west of the airport, currently zoned as agriculture, are proposed for annexation under the new City of Lincoln General Plan. Figure 2 shows farmlands within a four-mile circle around the proposed interchanges and at-grade intersections.

Information contained in the GIS databases were provided by Placer County. Placer County used the California Department of Conservation Farmland Monitoring and Mapping Program to locate and designate farmland within Placer County and the City.

The following table summarizes farmlands within the four-mile circles broken down into the following categories: Urban or built-up land, Grazing land, Farmland of Local Importance, Prime Farmland, Farmland of Statewide Importance, Unique farmland and Other[2]. Also shown are those parcels within the radius under the Williamson Act contract and those that will not renew their contracts.

Table 2 Farmland in Study Area

Type of Farmland	Farmland within Four-mile Areas	% Of Total Four-mile Areas
Urban and Built-up Land	2,451 acres	9.2%
Grazing Land	3,356 acres	12.6%
Farmland of Local Importance	12,534 acres	46.9%
Prime farmland	3,398 acres	12.7%
Farmland of Statewide Importance	833 acres	3.1%
Unique Farmland	2,706 acres	10.1%
Other	1,441 acres	5.4%
Total Farmland and Other	26,719 acres	100.0%
Williamson Act Parcels	6,638 parcels	86.4%
Non-Renewed Williamson Act	1,042 parcels	13.6%
Total Parcels in Four-mile Areaa	7,680 parcels	100.0%

Locally important farmland represents the majority of farmland located within the project vicinity and is predominant in all four-mile circles around the interchanges and intersections. Prime farmlands occur predominately in the south end of the bypass between Nelson Lane and Nicolaus Road and also occur in the area proposed for annexation..

Williamson Act

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use.

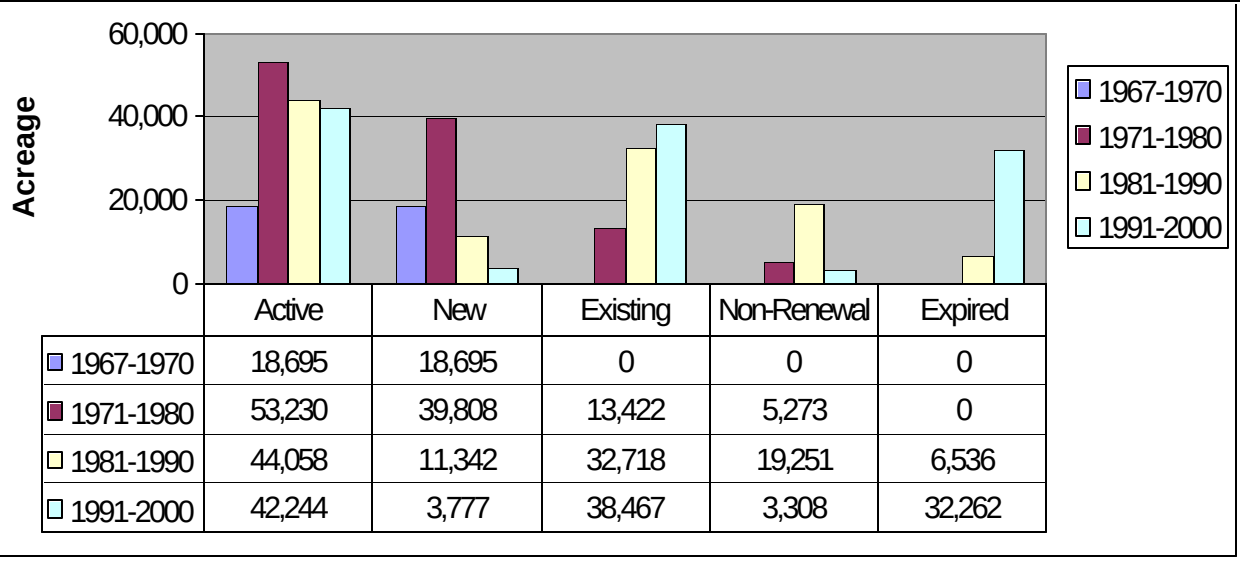
[2] Land that does not meet the criteria of any other category. Typical uses include low-density rural development, heavily forested land, and mined land or government land with restrictions on use.

The Williamson Act provides for lowered property taxes for lands maintained in agricultural and certain open space uses. The landowner enters into a contract with the county or city to restrict land uses to those compatible with agriculture, wildlife habitat, scenic corridors, recreational use, or open space. In return, the local authorities calculate the property tax assessment based on the actual use of the land instead of its potential value assuming full commercial development. To be eligible, the land must be designated by a city or county as agricultural preserve, scenic highway corridor, or wildlife habitat area; or it must be actively used for the three years immediately preceding the beginning of the contract as a saltpond, managed wetland, or recreational or open space area.

Each year the contract is automatically renewed for a new ten-year period, unless the landowner notifies the local government of a desire not to renew. If the landowner does not renew, the land use restrictions remain in effect until the remaining nine years of the contract have passed. There are also provisions for canceling the contract if cancellation is consistent with the purposes of the Williamson Act or otherwise found to be in the public interest.

The Williamson Act Parcels are displayed in Figure 2. Due to the amount of development in the area, fewer landowners are renewing their contracts. The number of parcels that have not renewed has decreased in the ten-year period between 1990 and 2000 (Western Placer Agricultural Study, January 2002). Much of the non-renewed contracts are for pastureland or "native" vegetation. Efforts are underway with Placer Legacy, Placer Land Trust and other concerned citizens to ensure that land is preserved for agricultural uses.

Table 3 Williamson Act Trends



	Active	New	Existing	Non-Renewal	Expired
1967-1970	18,695	18,695	0	0	0
1971-1980	53,230	39,808	13,422	5,273	0
1981-1990	44,058	11,342	32,718	19,251	6,536
1991-2000	42,244	3,777	38,467	3,308	32,262

There are 1,042 Williamson Act parcels within the four-mile circle around the interchanges and intersections, which according to Placer County officials will not be renewed, most occurring around the Wise Road intersection. Development around these areas depends upon land ownership and the desire for landowners to remain under contract of the Williamson Act. The proposed flood easement would prevent a portion of the non-renewed parcels from

being developed and the eventual grade separation at Wise Rd. with no access would also curtail some land speculation.

The owners of parcels located east of the existing SR 65 include Teichert and Coon Creek Cattle Company. In the City of Lincoln between the existing SR 65 and the proposed bypass JBL investment and Sutter Bypass Properties, Inc own some of the non-renewed parcels.

The parcels located within the proposed Lincoln annexation area include P & F Investment Company, located between Nicolaus and Wise Road. The parcels owned by P & F Investment Company are still under Williamson Act contracts but these contracts may be expired within 10 years. Some of the remaining parcel ownership within the four-mile circles includes John Hancock Mutual Life Ins. Co., Amaryllis Investments Inc., JBL Investments Inc., Sherwens Investments LLC, Warm Springs Investments LTD, the Canevari property under a Wetland Conservation Easement and Siller Bros. Inc. northwest of the bypass. Please refer to Figure 2 for more information on parcel ownership.

Investors adjacent to the bypass are more likely to develop lands if conditions within the City allow for such development. The majority of these investors are located within the City of Lincoln or are within the proposed future annexation of the City. The remaining investors are within close proximity to the bypass but are in areas currently zoned agricultural land and not within the City or the proposed annexation. Development could potentially occur as the City of Lincoln grows and if zoning is changed in the area.

Natural resources, aquatic resources

Riparian/Non-riparian habitat

Table 4 Riparian/Non-Riparian Woody Habitat

Type of woodland	Area within four-mile circles
Riparian Woody Habitat	188 acres
Non-Riparian Woody Habitat	389 acres
Total	577 acres

Most of the riparian woody habitat within the project area occurs in the four-mile circles surrounding Wise Road intersection and the Nelson Lane intersection (See Figure 3). The non-riparian wooded area occurs within the City of Lincoln and is already developed.

These computations were completed using GIS files provided by Placer County and based upon information obtained from the U.S. Environmental Protection Agency, California Department of Fish and Game and the United States Fish and Wildlife Service.

Vernal Pools

Table 5 Vernal Pools

Type of Vernal Pool	Area within Four-mile circles
Vernal pools/disked or disturbed	268 acres
Vernal pool-swale complex/disked or disturbed	3,044 acres
Vernal pools/unaltered landscape	39 acres
Vernal pool-swale complex/unaltered landscape	594 acres
Permanently flooded palustrine emergent	93 acres
Total	4,038 acres

The majority of vernal pool/vernal swale complexes that are disked or disturbed are located within the Wise Road area, west of the bypass along the area proposed for future annexation. The second largest portion of disked or disturbed vernal pools is located at the Nelson Lane intersection. The remaining vernal pool/vernal swale complexes that are disked or disturbed occur randomly throughout the remaining four-mile circles.

The categories of aquatic resources that lie within the four-mile circle at intersection and interchange locations are: 1,480 acres of vernal pools, 22 acres of open waters and 15 acres of permanently flooded palustrine emergents within the Wise Road intersection; 1,011 acres of vernal pools, 22 acres of open waters and 18 acres of permanently flooded palustrine emergents within the Industrial Boulevard interchange; 998 acres of vernal pools, 115 acres of open water, and 40 acres of permanently flooded palustrine emergents within the Nelson Lane interchange; 970 acres of vernal pools, 44 acres of open water, and 35 acres of permanently palustrine emergents within the Riosa Road interchange.

Although there are more acres of vernal pools within the Wise Road four-mile circle that could potentially be indirectly impacted by the bypass and growth of the City of Lincoln, the acquisition of conservation easements within the Coon Creek and Wise Road intersection area would prohibit the majority of potential indirect impacts from occurring. These easements would become part of the project description and acquisition would occur in coordination with Placer Legacy, EPA, ACOE, the City of Lincoln, and Placer County.

The area that has the largest intact disked or disturbed vernal pool/vernal swale habitat is located west of the proposed annexation area and will remain in the county and zoned for agriculture uses. A portion of that area is owned by P & F Investment Company.

The most common type of vernal pool habitat within the four-mile circles is vernal pool/vernal swales that are disked or disturbed. The second most common type of vernal pool within the four-mile circle study area is the vernal pool/vernal swale complex unaltered pools. This type of vernal pool is predominately located along the existing SR 65. Please refer to Figure 4 for exact locations.

Cumulative Impacts

The Council on Environmental Quality (CEQ) guidance defines cumulative effects as "the impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions" (40 CFR § 1508.7). Environmental cumulative effects occur when the environment does not have enough time to recover to its original condition before another outside action takes place to affect the environment.

Cumulative effects analysis necessarily involves uncertainties and assumptions, but useful information can be presented now to facilitate better decision-making. To the extent possible, information from past, present and reasonably foreseeable projects was obtained to help evaluate the cumulative impacts in the area. In addition, quantitative information was obtained where possible.

The resources that will be discussed for the cumulative impact analysis include agricultural land, wildlife habitat, and wetlands. The term ***Direct*** used in the tables represents the direct impacts associated with the bypass; the term ***Cumulative*** includes direct impacts and impacts associated with development in the project area where the information could be obtained. This cumulative analysis does not include indirect impacts due to the inability to directly link indirect impacts to the bypass and to determine the amount of impact caused by the bypass alone.

When the Bypass is considered with other reasonably foreseeable projects, cumulative impacts to some resources will be more severe than impacts to those resources caused by the highway project alone. The EIR for the Placer County General Plan Update concluded that impacts in eight major areas; land use, traffic congestion, cultural resources, loss of farmland, loss of agricultural production, habitat conversion and habitat quality reduction, increase in air pollutant emissions and traffic noise, taken as a whole, would result in potentially significant adverse impacts to land conversion and habitat quality reduction, and cause an increase in air pollutant emissions and traffic noise.

To get a clearer concept of the activities going on in the study area, the following tables display transportation projects that are planned or are currently taking place.

Transportation Projects in Study Area

A number of highway improvement projects are proposed within the project area and address existing congestion and safety concerns while providing for inter-regional transportation needs. These improvements may facilitate planned development in some areas, but are not expected to accelerate conversion of agricultural and other open space lands to developed uses except where this conversion is already occurring and planned for (e.g., Lincoln). Rather, the proposed road improvements are needed to keep pace with local and regional development conditions and prevent further deterioration of service levels and safety.

Table 6 Transportation Projects in Area

	County	Year Constructed
SR 65 Improvement from Roseville to Industrial Ave.	Placer	1997
Blue Oaks Interchange	Placer	1998
SR 193 improvements	Placer	1999
Future Improvements to the State Highway System		**Year Proposed**
Wheatland Bypass	Sutter/Yuba	2006
SR 70, McGowen to Striplin widening	Sutter/Yuba	2005
SR 99 Improvements	Sutter	2003
Third River Crossing	Yuba	2004
Marysville Bypass	Yuba	2005
Placer Parkway *Not part of the State Highway System	Placer	Not determined

The table represents State and Local priority projects that address growth, congestion and safety in the region. Senate Bill (SB) 45 redistributed STIP monies so that the Regional Transportation Planning Agencies (RTPA) and Metropolitan Planning Organizations (MPO) get 75% for regional use and the Department gets 25% for inter-regional use. In addition, SB 45 dictates how the Department prioritizes its funds on the inter-regional transportation system by amending Section 167 of the Streets & Highways Code to read:

167. (a) Funds in the State Highway Account in the State Transportation Fund shall be programmed, budgeted subject to Section 163, and expended to maximize the use of Federal funds and shall be based on the following sequence of priorities:

- Operation, maintenance and rehabilitation of the state highway system.
- Safety improvements where physical changes, other than adding additional lanes, would reduce fatalities and the number and severity of injuries.
- Transportation capital improvements that expand capacity or reduce congestion, or do both.
- Environmental enhancement and mitigation programs.

As a result of SB 45, the authority over how the majority of transportation dollars are spent is in the control of the regional planning agencies. It is the Department's mission to respond to a clearly demonstrated need, safety and highway maintenance or congestion relief, in that order. This legislation has made it clear that the Department's responsibility is to the inter-regional transportation system and the locals will maintain responsibility for local transportation systems. It should be also noted that the responsibility of determining land use lies in local governments hands.

Development in project area

The following table shows specific plans in the study area. These Specific Plans were used because they encompass many development activities within them. For example, Twelve Bridges Specific Plan includes Del Webb, East Ridge and East Lake plans.

Table 7 Summary of Lincolns' Specific Plan

Specific Plan	Total Acres	Residential Units	Population	Commercial acres	Industrial/ Business Park acres	Institutional acres[1]	Open Space acres
Twelve Bridges	5,985 ac	11,231	20,215	130 ac	71 ac	110 ac	2,515 ac
Lincoln Crossing	1,069 ac	2,958	8,459	43.2 ac	--	--	2,331 ac
Three D	70 ac	332	949	--	--	13 ac	16 ac
Laehr Estates	10 ac	53	151	--	--	--	--
Joiner Ranch	303 ac	1,756	5,022	28.1 ac	44.0 ac	13.0 ac	13.0 ac
Foskett Ranch	291 ac	501	1,432	--	13.1 ac	58.3 ac	123 ac
Air Center	640 ac	1,809	5,173	9.2 ac	295 ac	91 ac	19 ac
Lincoln Gardens	16 ac	64	183	--	--	--	--
Sterling Point	76 ac	--	--	56 ac	--	--	14 ac
Total	**8,460 ac**	**18,704 units**	**41,584 people**	**266 ac**	**423 ac**	**272 ac**	**5,031 ac**

Note: Population was determined using a population per household multiplier of 1.8 for Del Webb and 2.86 for all other projects.
[1] Acreage that includes public or quasi-public facilities
Source: General Plan Background Report 12/9/02

Habitat Conversion in Placer County

The Placer County General Plan (Placer County, 1994) identifies the predictable effects of planned growth within the county. Development under the Land Use Element described in the General Plan could result in a population increase of 45,000 over the 1990 baseline population. Most of this increase takes place in southern Placer County. The following table illustrates the conversion of natural habitat to urban development for the entire county based on the predicted 2010 scenario.

Table 8 Habitat Conversions for Placer County (2010 Scenario)

	Approximate extent of intact vegetation		Habitat Conversion		Habitat conversion or reduced habitat value		Limited habitat impacts	
Vegetation Communities ▼	Vegetation communities in unincorporated areas (1991)		Planned urban development in unincorporated areas		Planned urban, suburban and rural residential development in unincorporated areas		Existing and planned recreational, agricultural and forestry land uses in unincorporated areas	
Urban/ agriculture/ rangeland	*152,960 ac*	100%	*7,200 ac*	4.7%	*42,360 ac*	27.7%	*103,400 ac*	67.6%
Grassland	*29,000 ac*	100%	*3000 ac*	10.3%	*2,000 ac*	6.9%	*24,000 ac*	82.8%
Oak woodland	*29,000 ac*	100%	0	0.0%	*4,000 ac*	13.8%	*25,000 ac*	86.2%
Conifer forest	*462,000 ac*	100%	0	0.0%	*47,000 ac*	10.2%	*415,000 ac*	89.8%
Hardwood forest	*10,300 ac*	100%	0	0.0%	*7,000 ac*	6.8%	*96,000 ac*	93.2%
Chaparral/shrub	*56,000 ac*	100%	0	0.0%	*3,000 ac*	5.4%	*53,000 ac*	94.6%

Lincoln Bypass Draft Environmental Impact Statement/Report, 2001.

Preservation as a condition of development

Subsequent to the preparation of the City of Lincoln General Plan in 1988, new development has occurred consistent with General Plan designations. These projects generally include open space dedications to preserve areas of vernal pools, riparian corridors or other high quality resources and compensatory mitigation measures to offset unavoidable impacts to wetlands. The Lincoln General Plan recognizes Auburn and Markham Ravines as important open space resources, and both corridors are designated for preservation.

Farmland Cumulative Impacts

Sacramento Valley has been experiencing substantial urban development that has resulted in loss of farmland. The State of California has experienced a 13.8 percent increase in population from 1990 to 2000 and the ten counties in the Sacramento Valley have grown by 18.4 percent. Between 1992 and 1998, the California Department of Conservation Trust estimates that the valley experienced a loss of over 41,000 acres of farmland.

Growth within the project area is expected to continue to be concentrated primarily around existing developed communities. However, the farming population is aging, and for economic reasons, farmland is increasingly sold to land developers or speculators rather than kept in agricultural production by younger generations.

Urban growth can increase the rate at which Placer County agricultural lands are converted to non-agricultural uses, especially in western Placer, where large parcel sizes and proximity to Sacramento has made the area a prime target for new residential development. Land speculation in this area drive up land values and may reduce the economic viability of agricultural production. (Placer Legacy Open Space and Agricultural Conservation Program, May 15, 2000)

Due to the growth pressures and development that has been occurring, preservation of agricultural lands is one of the primary planning goals of the County and to some extent, the City of Lincoln. It appears that, at least for the foreseeable future, agricultural uses will continue to dominate. However, loss of farmland continues as housing tracts replace small farms. Table A, attached to this document, shows Placer County's land use conversion from 1998 to 2000. Total Prime farmland converted to other uses is 696 acres and there have been 8,064 acres of total farmland of local importance converted to other uses.

The Placer County General Plan EIR identified the cumulative direct conversion of farmlands in Placer County as significant and unavoidable because the build out under the General Plan land use diagram would result in the direct conversion of 6,340 acres of farmland in Placer County, including 840 acres of prime farmland, by the year 2010.

Information on impacts to agricultural lands from major development projects in the study area was obtained from project environmental documents. Not all the environmental documents were available, and some did not describe the agricultural impacts, so the following information is an estimate. The total farmland affected by all the projects in the area total approximately 1,700 acres. Approximately 42.2 percent of the study area for the bypass is

classified as agricultural land. The total acreage identified in the revised alternative analysis prepared by LSA for Caltrans determined that 234.1 acres within the study area devoted to agricultural uses.

The farmland area within the four-mile circles is 26,719 acres. This figure includes 3,398 acres of prime farmland acres, 833 acres of statewide importance, 2,706 acres of unique farmland, 12,534 acres of local importance and 1,441 acres of other land that includes low-density rural development (See Figure 2)

Table 9 Agriculture Total Estimated Impacts

Direct	234 acres
Impacts from other projects within area	1,700 acres
Cumulative	1,934 acres

Riparian Woody/Non-Riparian Woody Habitat Cumulative Impacts

According to estimates there is only five to six percent of historic riparian habitat intact in Placer County, much of it lost to urbanization and other factors. Information on riparian habitat impacts from major development projects in the study area was obtained from project environmental documents. Not all the environmental documents were available, and some did not describe the riparian habitat impacts, so the following information is an estimate. According to the project environmental documents that were obtained, impacts to this resource total approximately 14.2 acres. However, this amount is low due since the information was simply not available.

The direct impacts associated with the bypass amount to a total of 11 acres and the area within the four-mile circle that could potentially be impacted by both the bypass and other development activities include 188 acres of riparian woody and 389 acres of non-riparian acres. (See Figure 3)

Table 10 Riparian/Non-Riparian Woodlands Total Estimated Impacts

Direct	11.0 Acres
Impacts from other projects in area	14.2 Acres
Cumulative	25.2

Wetland/Vernal Pool Cumulative Impacts

Although there is agreement that vernal pool loss is occurring due to urbanization and other factors, the exact amount of this loss has been debated. Vernal pool habitat loss in the Central Valley was estimated in the 1970's to be around 67 to 88 percent (Holland 1978, and Robert Holland, consultant, in litt. 1992). According to the Federal Register (March 26, 1997) on EPA's website these figures have been disputed and the estimates changed to 50 percent (59 FR 48139; R. Holland, pers. comm. 1996).

For many years a baseline measurement was never obtained and vernal pool inventory was only done on a project-by-project basis. Mapping obtained from the Department of Fish

and Game and Placer County shows that the majority of vernal pools in the project area have been disturbed in some fashion, due in part to agricultural uses in the project area.

Specific Plan environmental documents obtained from projects listed in Table 7 total the impacts to vernal pools to 19.61 acres, 7.91 acres of seasonal marsh and 1.76 acres of open water are also impacted. One of the environmental documents did not break down the acreages but did calculate a total wetlands impact area to 36.1 acres. These projects include projects that are planned, in construction or have recently been built.

The direct impacts from the bypass total 5.5 acres of vernal pools and swales, and 13.6 acres of jurisdictional waters. A total of 4,038 additional acres that represent all wetland types in the project area are within the four-mile circles that could potentially be impacted by future development. (Figure 4).

Table 11 Vernal Pools/Wetland Estimated Cumulative Impacts

	Vernal Pools	Seasonal Marsh/ Swales	Open Water/ Jurisdictional Waters	Combination[1]	Total Impact
Direct	5.5 ac	--	13.6 ac		**19.1 ac**
Impacts from projects within area	19.61 ac	7.91 ac	1.76 ac	36.1 ac	**65.4 ac**
Cumulative	25.1 ac	7.91 ac	15.36 ac	36.1 ac	**84.5 ac**

[1]Represents combination of vernal pools, seasonal marsh/swales and open water.

Conservation Planning

Placer Legacy Habitat Conservation Plan for Placer County

Description

The concern over development pressure that will be occurring over the next 20 years and the possibility of losing county natural resources prompted the creation of Placer Legacy. Placer Legacy was established in 1998, using three working groups to provide input from a variety of stakeholders. These groups consisted of a Citizens Advisory Committee, an Interagency Working Group and a Scientific Working Group. Placer Legacy has identified county trends, resource conflicts and possible strategies to address growth pressures. Strategies currently being pursued are land acquisitions and easements, agency coordination, education and incentives. In November of 2002 Placer Legacy was actively negotiating purchases with property owners for approximately 1,300 acres of conservation easements west and north of the proposed Lincoln Bypass to limit growth-inducing impacts. That number has risen to 2,060 acres of land protected in the Sierra Nevada, Sierra Nevada foothills and Central Valley. In addition, the Placer Legacy is involved in the Miners Ravine Restoration project at the Miners Ravine Reserve site in Granite Bay, the Auburn Ravine/Coon Creek Ecosystem Restoration Plan and the American River Fuel Load Reduction Plan as well as engaging in ongoing coordination with the Agricultural Commissioner's Office on matters related to agricultural conservation.

Funding

Placer Legacy's funding comes from a variety of sources including grants, general funds, mitigation funds, donations, acquisition funds, resource agencies and other miscellaneous sources. Voters defeated a ¼ cent sales tax proposed to provide a secure source of funding for Placer Legacy. However, the County and Placer Legacy are initiating a public outreach program in order to promote the Placer Legacy in the community with the goal of re-introducing the measure to the voters.

Timeframe

Placer Legacy is working on Placer County's Habitat Conservation Plan (HCP) and a Natural Communities Conservation Plan (NCCP) is expected to be completed in 2004. This Plan will be implemented in phases. The first phase is to gather information on vernal pools/grasslands, valley riparian habitats and salmon habitat in the areas within Western Placer County. Phase two will be to collect that information for the Foothills and the East Side Sierra Nevada and the third phase will focus on the west and east Sierra Nevada. Once resources have been identified, the HCP/NCCP will be prepared with guidance from various stakeholders such as the scientific community, land development interests, the environmental community and agricultural interests. A scientific working group will continually provide advice and assistance to ensure that the program incorporates sound principles of conservation ecology. These plans will establish a conservation strategy to ensure that resources are protected from development. In addition, financial mechanisms will be analyzed to determine how to implement these plans. The City of Lincoln is a member of Placer Legacy and will be participating in programs that will provide for conservation of prime agricultural lands in addition to conservation easements within their jurisdiction.

Placer Legacy's activities may minimize some of the potential growth inducement effects being attributed to this project and the growth that is occurring in Lincoln. As a show of trust in the Placer Legacy process, Caltrans has engaged it in the process of meeting project mitigation requirements early by working in partnership to create Aitken's Ranch.

Other Preservation Measures

The Aitken Ranch Mitigation Site was established by a Wildlands Inc., a private habitat development company, to mitigate impacts to biological resources occurring as a result of land development in Placer County. The 317-acre property west of Lincoln, CA, features 21.16 acres of vernal pools/swales, 18 acres of riparian wetlands, 20 acres of valley oak woodlands, 177 acres of grasslands, 16.38 acres of emergent marshes/open water and 47.5 acres of riparian oak woodland. The mitigation site is bisected by the Auburn Ravine for more than a mile. Caltrans purchased these mitigation values in advance of environmental document approval to ensure these resources are protected. This mitigation site is now functioning will be self-sustaining before the project begins construction.

Other conservation/preservation efforts in the area include Auburn Ravine and Coon Creek restorations and other preservation activities. Since 1998, the county has been awarded

almost $4.5 million in state, federal and private-sector grants for land acquisition, habitat restoration and planning work. Much of this funding is directed at improvements to seven watersheds in western Placer County.

A private property owner just recently began working with California Conservation Fund to purchase and establish 330 acres of preserve outside of Lincoln located at North Dowd and Waltz roads in Sheridan, near Coon Creek and next to the 1,000 acre Lakeview Farms Hunting and Fishing Preserves. This project proposes to establish ponds and other habitat for wildlife creating a wetland project that would incorporate training of hunting dogs.

Although these preservation efforts do not reverse the impacts associated with development or the bypass in the project area, they do provide some action on the part of Placer County, the City of Lincoln and private citizens to protect and preserve the rural quality and natural resources of a town that is facing tremendous growth pressures.

Options Considered to Address Potential Indirect and Cumulative Impacts

Meetings were held with staff representing EPA, ACOE, FHWA, City of Lincoln, Placer County, PCTPA and Caltrans to discuss several concerns during the NEPA/404 process. Input received from EPA regarding the potential indirect and cumulative impacts has been instrumental in creating this analysis and the options that were considered.

Caltrans takes these concerns about potential affects to our vital aquatic resources very seriously, and has worked closely with these agencies to examine several options that might address those concerns. The following listing represents collaboration with many personnel and agency representatives to avoid impacts to aquatic resources in the Coon Creek watershed:

Option 1. Overcrossing at Wise Road with Initial Project Construction

Construction of an overcrossing at Wise Road in the initial project would preclude any local access at that point. Unfortunately, this option would also deny an important access that Placer County and the City of Lincoln have anticipated and planned to help detour large numbers of trucks hauling aggregate and other materials around the city rather than through downtown Lincoln. Trucks using the Wise Road/Bypass routing rather than existing SR65 through Lincoln will measurably improve the quality of life for Lincoln residents long tired of the pedestrian and traffic safety issues, noise, dust and damage to streets caused by aggregate haulers rumbling through town. For this reason, the City, County and PCTPA are strongly opposed to this option.

Option 2. Establishment of a Large Floodplain Easement to the East of Wise Road (Figure 6)

This option examined a possible lowering of the Bypass roadway profile and reduction of the bridge structure length, using any attendant cost savings to purchase a large floodplain easement in one quadrant of the Wise Road intersection. Caltrans Structures Hydraulics unit modeled the 100-year flood event at this location and determined that the floodplain easement required would be approximately 80 acres. This proposed floodplain easement at Wise Road would likely prevent potential indirect impacts. However, Caltrans understands that EPA

strongly supports obtaining an easement in this area, but since this would be mostly a detention basin caused by the filling of the Coon Creek floodplain, the basin itself would be considered a negative rather than a positive impact.

Option 3. Purchase of Easements on the Four Quadrants of the Bypass/Wise Road Bypass Intersection

To address EPA's concerns about indirect affects attributable to the proposed access at Wise Road, Caltrans examined an option that appeared to directly focus on the intersection location. This option would acquire conservation easements in each of the four quadrants of the Wise Road/Bypass intersection, not to exceed a total cost of $500,000, thereby effectively preventing growth inducing developments from occurring in that immediate vicinity. Although this concept was discussed briefly, this option was not pursued due to the more favored options 5 and 6.

Option 4. Elimination of Proposed Undercrossing at Dowd Road and Road Modifications to Accommodate an Initial Overcrossing at Wise Road (Figure 7)

EPA suggested that Caltrans examine this option to see if enough cost savings could be generated by eliminating the proposed undercrossing structure at Dowd Road from the project design, and applying those savings to construction of an overcrossing at Wise Road. Unfortunately, elimination of the Dowd Road structure would necessitate either realignment of heavily used Dowd Road or construction of frontage roads. Because of those additional modifications, there would not be adequate cost savings from this option. The access issues discussed under Option 1 above would also be the same with this option, with the same strong level of local and regional opposition to loss of access at Wise Road.

The figure represents a preliminary design modification of Dowd Road that would require a ninety-degree alignment with the bypass. This 90-degree alignment with the overcrossing and an embankment is needed before a turn or curve is introduced. There are restrictions to introducing turns or curves into a design and this was taken into account for the preliminary design concept. Also, a minimum curve radius was created according to the speed of traffic required by the local agencies.

Option 5. Purchase of Conservation Easements within the Coon Creek Watershed Designated in the two-mile Radius of Wise Road (Figure 8)

In a May 29, 2003 meeting, Caltrans and EPA discussed the possibility of conservation easements for protecting Coon Creek in the vicinity of Wise Road. Caltrans asked EPA to provide suggestions on the dimensions of an area along Coon Creek that could be protected as an alternative to constructing the overcrossing at Wise Road. EPA suggested that Caltrans map the Coon Creek watershed, including a five hundred foot buffer on either side of the watershed, within a two-mile radius of the Wise Road/Bypass intersection. The mapped watershed, including buffers on the north and south sides of the watershed, total 5,206 acres. At a cost of several thousands of dollars per acre to secure easements, this option would cost in the tens of millions of dollars, and is clearly not a viable option. Caltrans understands that

EPA intended this option to be more of a means of gauging the extent of watershed and possible aquatic resources lying within a two-mile radius of Wise Road, rather than outright acquisition of easements on the entire 5,206 acres.

Option 6. Purchase of Conservation Easements along the Coon Creek Watershed Corridor (Figure 9)

Since Option 5 is clearly cost prohibitive, Caltrans has investigated a more realistic but still meaningful level of effort to acquire conservation easements in the Coon Creek watershed. Figure 6 illustrates the efforts currently underway by Placer Legacy in working with the private sector to establish other conservation easements within this watershed. An opportunity may be present to link these other easements with a linear pattern of conservation easements that would provide synergies and cumulative benefits to the entire watershed area in question. Caltrans is prepared to work closely with Placer Legacy, EPA and the Corps to implement this option.

Further discussion between Caltrans, EPA and FHWA on Friday, June 6th, 2003 of Options 1 and 6, determined that in lieu of constructing an initial overcrossing at Wise Road (Option 1), Caltrans commits to acquiring conservation easements in the Coon Creek watershed/floodplain equivalent to the approximate cost of constructing the overcrossing structure. This cost is an estimate based upon preliminary design concepts for the project and is computed as follows:

- 1,800 square meters of bridge structure at $900 per square meter = $1.6million.
- 13,000 square meters of pavement structural section at $40 per square meter = $0.50million.
- 200,000 cubic meters of embankment material at $9 per cubic meter = $1.8million.

Total approximate cost is equal to $3.9 million

The conservation easements would demonstrate avoidance of potential indirect affects to aquatic resources that might otherwise be attributable to provision of access at the Wise Road intersection. An acquisition strategy will be included in the project description and outlined in the Final EIR/S.

These conservation easements are generally a type of land use restriction that limits the property owner's use of property burdened by the easement (a covenant running with the land in perpetuity). Only uses that are consistent with the terms and conditions of the easement are permitted. These instruments tend to be very detailed by their very nature and require careful crafting and legal review to ensure the intent of parties in creating the easement. Grantor and grantee rights would be described in substantial detail. The terms of the easement include identification of the property subject to the easement; the specific aspects of the property that is being preserved (examples include major habitat, aesthetic value, scenic value, agricultural

uses, etc.); the land uses that would likely be compatible with the easement (together with uses that are not compatible). Additional terms might cover enforcement of terms and conditions, remedies for violation of the easement provisions, possibly provide for a specific management plan for the site, assignment and amendment terms and other considerations. A willing party to be the owner of the easement would also need to be identified (usually a public agency). All of these aspects would need to be specified in the grant of easement document.

Conclusion

The City of Lincoln has experienced rapid growth in the last few years and is planning to continue to grow at a similar pace. This growth is desired by the City and accounted for in their General Plan. When considering the many projects within the Study area, there may be an overall significant cumulative impact on farmland and natural resources. However, the cumulative and indirect impacts in the study area may not be attributable specifically to the Bypass project but may in fact be attributable to growth that is planned and projected for the city.

The growth that has been occurring and that is projected for the City of Lincoln has been substantiated by the information included in this analysis. Rocklin and Roseville to the south, Sheridan to the north and the foothills to the east direct this growth naturally to the west towards the airport. The City will probably take action to annex the area west of the airport to accommodate planned growth.

Programs such as Placer Legacy and the Habitat Conservation Plan development could potentially minimize some impacts of this growth. In addition, each individual transportation and development project will provide for mitigation of their impacts to natural resources. Impacts to ACOE jurisdictional wetlands would require consultation, mitigation and ultimate approval from the ACOE. Wetlands, vernal pools and riparian habitat are generally mitigated to the ACOE's no-net-loss policy.

This analysis attempts to provide information and discussion on indirect and cumulative impacts but must also state the limitations inherent in such an analysis. The potential indirect impacts section provides information on resources in the area that could potentially be indirectly impacted by growth that may occur due to the bypass, but must also consider the growth that is occurring or is projected to occur in the area. It is this challenge that has posed problems in the agreement of assumptions used in this analysis. Research in this area of concern has not drawn a clear methodology and has instead given the discretion to the agency performing the analysis. In addition, there is no proven method that can directly link the potential indirect impacts to a specific project when there are many other factors that contribute to resource impacts.

The planned and projected growth, the policies regarding land use, the potential preservation and conservation, housing prices and location attractiveness all contribute to the impacts associated with growth. This analysis discloses resource information and provides a summary of options that Caltrans has considered to avoid or minimize potential indirect and

cumulative impacts that may occur due to the project. Finally, Caltrans has committed to the acquisition of conservation easements in the Coon Creek watershed/floodplain equivalent to the approximate cost of constructing an overcrossing structure at Wise Road. The conservations easements would demonstrate avoidance of potential indirect affects to aquatic resources that might otherwise be attributable to provision of access at the Wise Road intersection. This avoidance strategy of acquiring conservation easements will be incorporated in the project description in the Final EIR/S.

Resources

The following references were used as resources in developing the Indirect and Cumulative Impacts analysis:

- Q & A Regarding the Consideration of Indirect and Cumulative Impacts in the NEPA process. (FHWA, January 2003)
- Land use Impacts of Transportation, A Guidebook. NCHRP Report 423A.
- A Guidebook for Evaluating the Indirect Land Use and Growth Impacts of Highway Improvements. (Oregon Dept. of Transportation, April 2001)
- Considering Cumulative Effects. (Council on Environmental Quality, January 1997)
- NCHRP Report 466 Desk Reference for Estimating the Indirect Effects of Proposed Transportation Projects (Transportation Research Board 2002)
- City of Lincoln General Plan Updates, 2001
- Do Highways Matter? Evidence and Policy Implications of Highways' Influence on Metropolitan Development Prepared for The Brookings Institute, August 2000
- Road Expansion, Urban Growth, and Induced Travel: A Path Analysis: Robert Cervero Department of City and Regional Planning Institute of Urban and Regional Development, University of California, Berkeley, July 2001
- Interim Guidance: Questions and Answers Regarding Indirect and Cumulative Impact Considerations in the NEPA Process, FHWA, January 31, 2003
- Community Development: Local Growth Issues? Federal Opportunities and Challenges Appendix VII: The Influence of Federal Infrastructure Programs on Local Growth; Appendix X: Federal Policy Options; Appendix XII: Comments from the Environmental Protection Agency U.S. General Accounting Office, Report to General Requesters, September 2000
- A Guidebook For Evaluating The Indirect Land Use and Growth Impacts of Highway Improvements, Final Report, ECO Northwest and Portland State University for Oregon DOT and FHWA, April 2001
- Consideration of Cumulative Impacts in EPA Review of NEPA Documents, U.S. Environmental Protection Agency, Office of Federal Activities, May 1999

Contacts

The following agencies and people were contacted to provide information for this report:

- Sacramento Area Council Of Governments, Joe Concannon, Senior Planner
- Placer County Transportation Planning Agency
- City of Lincoln, Rod Campbell, Community Development Director
- Placer County Planning Department, Loren Clark and Kelly Berger
- Office of Planning and Research, Scott Morgan
- U.S. Environmental Protection Agency; Nancy Levin, Tim Vendlinski, Erin Foresman
- California Department of Fish and Game; Joe Carboni, GIS Analyst

Attachment A

PLACER COUNTY
1998-2000 Land Use Conversion

CALIFORNIA DEPARTMENT OF CONSERVATION
Division of Land Resource Protection

Farmland Mapping and Monit

PART I
County Summary and Change by Land Use Category

LAND USE CATEGORY	TOTAL ACREAGE INVENTORIED		1998-00 ACREAGE CHANGES			
	1998	2000	ACRES LOST (-)	ACRES GAINED (+)	TOTAL ACREAGE CHANGED	NET ACREAGE CHANGED
Prime Farmland	9,750	9,901	696	847	1,543	151
Farmland of Statewide Importance	5,195	5,312	769	886	1,655	117
Unique Farmland	22,727	23,616	1,679	2,568	4,247	889
Farmland of Local Importance	114,452	111,987	4,920	2,455	7,375	-2,465
IMPORTANT FARMLAND SUBTOTAL	152,124	150,816	8,064	6,756	14,820	-1,308
Grazing Land	31,695	29,656	3,996	1,957	5,953	-2,039
AGRICULTURAL LAND SUBTOTAL	183,819	180,472	12,060	8,713	20,773	-3,347
Urban and Built-Up Land	37,608	41,448	2,633	6,473	9,106	3,840
Other Land	185,057	184,585	3,163	2,691	5,854	-472
Water Area	5,047	5,026	69	48	117	-21
TOTAL AREA INVENTORIED	411,531	411,531	17,925	17,925	35,850	0

PART II
Land Committed to Nonagricultu

LAND USE CATEGORY
Prime Farmland
Farmland of Statewide Importance
Unique Farmland
Farmland of Local Importance
IMPORTANT FARMLAND SUBTOTAL
Grazing Land
AGRICULTURAL LAND SUBTOTAL
Urban and Built-Up Land
Other Land
Water Area
TOTAL ACREAGE REPORTED

PART III Land Use Conversion from 1998 to 2000

LAND USE CATEGORY		Prime Farmland	Farmland of Statewide Importance	Unique Farmland	Farmland of Local Importance	Subtotal Important Farmland	Grazing Land	Total Agricultural Land	Urban and Built-Up Land	Other Land	Water Area
Prime Farmland (1)	to:	--	28	130	447	605	0	605	52	39	0
Farmland of Statewide Importance (1)	to:	72	--	213	162	447	48	495	4	270	0
Unique Farmland (1) (2)	to:	99	259	--	1,100	1,458	2	1,460	12	207	0
Farmland of Local Importance (3)	to:	560	337	1,965	--	2,862	205	3,067	1,253	600	0
IMPORTANT FARMLAND SUBTOTAL		731	624	2,308	1,709	5,372	255	5,627	1,321	1,116	0
Grazing Land	to:	0	31	8	181	220	--	220	3,387	376	13
AGRICULTURAL LAND SUBTOTAL		731	655	2,316	1,890	5,592	255	5,847	4,708	1,492	13
Urban and Built-Up Land (4)	to:	4	10	23	122	159	1,281	1,440	--	1,193	0
Other Land	to:	112	221	229	443	1,005	358	1,363	1,765	--	35
Water Area (5)	to:	0	0	0	0	0	63	63	0	6	--
TOTAL ACREAGE CONVERTED	to:	847	886	2,568	2,455	6,756	1,957	8,713	6,473	2,691	48

Notes to the Reader:

(1) Conversions between Important Farmland categories primarily due to corrections made to soil unit identification throughout the county.
(2) Conversion to Farmland of Local Importance primarily due to land left idle for three update cycles and refinements to agricultural boundaries.
(3) Conversion to Unique Farmland primarily due to new irrigated agriculture and refinements to agricultural boundaries.
(4) Conversion from Urban and Built-Up Land primarily the result of refinements made to the urban boundary around Roseville, Rocklin and Lincoln.
(5) Conversion to Grazing Land primarily due to refinements made to North Fork Lake and Rock Creek Lake.